Stanley Consultants INC.

MEETING NOTES

Date: March 13, 2013

Place: NV Energy Reid Gardner Station
Moapa, Nevada

Project/Purpose: NV Energy - Reid Gardner Station
Implementation of Administrative Order on Consent (AOC)
Quarterly Meeting

Attendees: Greg Lovato/NDEP
Alison Oakley/NDEP
John Kivett/Arcadis
Brad Cross/Arcadis
Jason Reed/NV Energy
Mike Rojo/NV Energy
Matt Johns/CH2MHill
Becky Svatos/Stanley Consultants
Todd Knause/Stanley Consultants
Africa Espina/Stanley Consultants
Jonathan Sarich/Stanley Consultants
William Carrig/Stanley Consultants

Notes By: William Carrig/Stanley Consultants

A meeting was held between NV Energy (NVE) and Nevada Division of Environmental Protection (NDEP) representatives on March 13, 2013 to discuss the status of the implementation of the AOC signed by NVE and NDEP on February 22, 2008. Topics discussed during the meeting are summarized below.

Plant Tour – A tour of the Reid Gardner facility was conducted.

Overall AOC Process and Progress – Stanley Consultants/NVE showed flow charts that provided an overview of the AOC process that included the NDEP-approved process of developing the Final Conceptual Site-Wide Model (CSM). This process is based on the American Society for Testing and Materials (ASTM) Standard E 1689-95 (reapproved 2008) Standard Guide for Developing Conceptual Site Models for Contaminated Sites, as requested by NDEP. This process began with the collection of background information and development of a Site Related Chemicals (SRC) list, which have both been completed. Current efforts related to the CSM development include the identification, evaluation and characterization of source areas at the site. NVE submitted a Draft Preliminary Source Area Identification and Characterization Report (PSAICR) to the NDEP for review in November 2012. This report is discussed in more detail below. NVE and Stanley Consultants are also concurrently evaluating background conditions in soil and groundwater at the site (also discussed below in more detail) as well as identifying geologic data gaps. Future steps in this process include the development of preliminary migration pathways and environmental receptors that will lead to the development of a Preliminary CSM with data gaps, which is currently forecasted to be approved by the NDEP in 2015-2016. Following approval of the Preliminary CSM with data gaps, additional data collection is anticipated to

occur in 2016-2017 to address the identified data gaps. Once the additional data is collected, a Final CSM will be developed which is currently forecasted to be approved by NDEP in 2017-2018. Stanley Consultants/NVE reported that they plan to provide a visualization of the preliminary CSM at the next quarterly AOC meeting in June 2013 using ArcGIS software. This model is expected to be helpful in the identification of data gaps that may need to be addressed. Stanley Consultants will also provide information on Muddy River water quality upstream and downstream of the Station.

Because the CSM process is lengthy, Stanley Consultants/NVE clarified that they are not waiting until the Final CSM is approved to begin addressing identified source areas. For example, pond solids and underlying soils have already been removed from Ponds D, G and F; an 850,000-gallon aboveground storage tank (AST) containing diesel fuel has been removed, and characterization of several source areas has been conducted (e.g., WMU-7, scrubber/absorber areas, Unit 4 Pond area). The Draft PSAICR discusses this process of addressing "sub-areas" and the implementation of a "Mini-CSM".

Following final NDEP approval of the CSM, remaining AOC steps include the development of Corrective Action Alternative Studies, Corrective Action Plans (CAP), CAP implementation, construction and operation of remedial system(s), a Remediation Completion Report, and finally a No Further Action (NFA) determination and statement of AOC Completion by the NDEP.

The vision of the AOC end point was discussed. It was agreed that cleaning up all groundwater under the Station to background levels may not be technically feasible. If it is shown that groundwater is impacting the Muddy River, remedial alternatives could be developed to prevent this impact. These alternatives could include physical barriers (e.g., sheet piling installed into underlying clay layer), hydraulic barriers (e.g., trenches), or enclosing the river in areas where it could interact with contaminated groundwater. Data collection efforts should focus on gathering information that can be used to reach the end point.

NDEP may not require environmental covenants for contaminants left in place at the Station because it is not in an urban area and the site will likely be owned by NVE indefinitely. NDEP may require deed restrictions or deed notices.

Preliminary Source Area Identification and Characterization Report (PSAICR) –The goals of the Draft PSAICR report were to identify the potential source areas at the Station, summarize existing information and data on the source areas, and determine whether additional data collection was needed to complete the characterization of each source area. NDEP stated that they agree that the source areas have been identified. Prior to the meeting, NDEP provided preliminary comments regarding which source areas they believe will require further soil and/or groundwater characterization as well as which source areas they consider to be high, medium and low priority. The criteria that NDEP used to assign priorities to the source areas were:

- Potential for a pathway to receptors
- Presence of observed impacts to groundwater
- Source area acting as a continuing source of contamination
- Likelihood of future impacts to groundwater
- Groundwater conditions and impacts to groundwater unknown
- Chemicals of concern

High priority source areas were identified by the NDEP based on the following criteria:

- Probable pathways to receptors (e.g. Muddy River)
- Current known significant impacts to groundwater
- Continuing source of groundwater contamination is probable

NDEP would like these source areas addressed first.

Medium priority designation was based on the following:

- Possible or potential pathway to receptors
- Impacts to groundwater are present or unknown and/or groundwater conditions are unknown
- Continuing source of contamination may be present

NDEP suggested that these source areas be addressed as resources become available. These medium priority source areas included areas where investigations cannot be conducted because of active facility operations in the area.

Low priority designation was based on the following:

- High likelihood that contamination will not reach groundwater; pathways to receptors are unlikely
- It has been demonstrated that the source is not currently impacting groundwater
- Source has been eliminated or is not likely be continuing
- It is a de minimus or remediated source area

NDEP suggested that these source areas be addressed after the high and medium priority source areas are addressed. If NVE chooses to address medium and/or low priority source areas soon, this should not be done at the expense of addressing the high priority source areas.

Offsite areas are not "source areas", therefore, the NDEP did not prioritize offsite impacts. This does not mean that impacts to an offsite property due to contamination, such as from underlying groundwater, should not be taken into account. NDEP is most concerned with stopping or lessening the onsite loading to groundwater so that it does not affect offsite groundwater in the future.

High priority source areas identified by NDEP are as follows:

- PA-3 – Former Pond 4A
- PA-5 – Former Pond D
- PA-6 – Pond E (E1-E2)
- PA-7 – Former Pond F
- PA-7 – Former Pond G
- SA-14- Former Underground Product Piping, Petroleum Tanks
- SA-4 -Units 1,2,3 and Unit 4 Coal Piles/Fly Ash Under Unit 4 Coal Pile

NDEP initially designated SA-4 (Units 1,2,3 and Unit 4 Coal Piles/Fly Ash Under Unit 4 Coal Pile) as a high priority source area. However, based on the fact that the coal piles are active and further soil characterization will be required once they are taken out of service, NDEP agreed that they can be designated as medium priority source areas.

Additional characterization in the area south of PA-5 and PA-6 will be required to address these high priority source areas. This area is currently owned by the Bureau of Land Management (BLM) and they would need to grant access for the characterization efforts in this area. NDEP stated that NVE can send a letter to NDEP requesting to no longer operate the groundwater recovery trench located on the south side of PA-6 because of its limited effectiveness.

NVE said they would like to address some of the lower priority source areas concurrently with the high

priority source areas. NDEP stated that this was acceptable. In order to request an NFA decision on a specific source area, NVE needs to send a letter to NDEP with a summary of information on the source area and the reason why no further action is necessary at the source area. A detailed evaluation of pathways and receptors is not necessary. It was discussed that the following source areas may be eligible for NFA status with the NDEP without additional data collection:

- MA-2 – Special Asbestos Waste Cell (WMU-2) (Actively Permitted)
- PA-8 – Hydrogen Peroxide Tank Release
- SA-7 – Unit 4 Settling Pond (Foster Wheeler Pond)
- SA-12 – Former 850,000-gallon Diesel AST
- SA-13 – Former Diesel Fuel Unloading Area
- SA-17 – Reported Previous Waste Disposal Area (WMU-8)

NDEP and NVE also discussed that there are several source areas that could potentially achieve NFA status with the NDEP following a minor amount of additional characterization:

- PA-4 – Closed Fly Ash Fill Area Under Landfill Haul Road (WMU-6)
- SA-5 – Area of Previous Fly Ash Fill (WMU-14)
- SA-6 – Area of Previous Fly Ash Fill (WMU-13)
- SA-9 – Units 1 and 2 Emergency Diesel Generator

NVE needs to obtain NDEP approval prior to conducting any sampling activities. If only a limited amount of sampling is planned, an e-mail to NDEP that describes the planned sampling activities will be adequate. For more extensive characterization efforts, NVE needs to submit a work plan to NDEP.

NDEP's preliminary comments on the conclusions and recommendations in the PSAICR were discussed. In general, NDEP would like more detail provided in the table summarizing these recommendations so that the table can be referred to separately from the text. NDEP stated that they will provide comments on the November 2012 PSAICR in a couple of weeks. The comments will focus mostly on the conclusions. NDEP and NVE agreed that a common goal is to have the revised PSAICR submitted to NDEP before the next quarterly AOC meeting in June 2013.

Diesel Recovery System – NDEP reported that Broadbent and Associates (Broadbent) has been hired to evaluate short term and long term diesel recovery system improvement options. On February 12, 2013, the remediation system was reactivated. Broadbent personnel adjusted the stingers at the extraction wells to remove only product in an effort to get free product depths below the regulatory limit of one-half inch. Additionally, free product in monitoring wells HM-50R and HM-48 has been removed by Broadbent using bailers since these wells are not connected to the diesel recovery system. Broadbent has been onsite almost daily since February 12 to adjust the system and manually remove product. Broadbent issued a letter to NDEP describing the work that has been completed to date, which includes the removal of approximately 300 gallons of free product since February 12. NVE stated that a Work Plan describing planned diesel recovery system improvements will be submitted to the NDEP by March 31, 2013. This Work Plan will describe how the system will be modified so that both groundwater and product can be pumped in the future. Currently, NVE and Broadbent are considering the use of a carbon adsorption system to treat water that is extracted from the diesel recovery system so it can be used for dust control on the coal piles. In addition, NVE may add total fluids pumps to wells that are not currently connected to the recovery system. NDEP was satisfied with the diesel recovery system activities.

Evaluation of Background Conditions –NVE/Stanley Consultants is currently preparing the first background deliverable that includes a summary of the background field activities, a statistical

evaluation of background soil data, and a discussion of the aquifer testing results. This draft report is planned to be submitted to the NDEP for review during the first quarter of 2013. NDEP and NVE agreed that a common goal would be to receive NDEP comments on this draft report before the next quarterly AOC meeting.

NVE/Stanley Consultants is concurrently preparing a draft deliverable that discusses background groundwater levels. Once comments are received from NDEP on the first background deliverable, the NDEP comments will be addressed and the background groundwater information will be added to create a complete background report.

Data validation reports for background soil samples as well as the first three quarters of background groundwater samples were previously submitted to Arcadis and NDEP for review. Arcadis provided a letter addressed to the NDEP stating that the data validation of the first three quarters of background groundwater data are acceptable and the data collected is useable. Arcadis indicated that they will issue a similar letter regarding the background soil data validation.

Unit 4 Evaporation Ponds Monitoring Wells Installation –NVE reported that 10 monitoring wells have been installed in the vicinity of the B and C ponds in accordance with the NDEP-approved Unit 4 Evaporation Ponds Monitoring Well Installation Plan. The shallow wells are approximately 20 – 25 feet deep and the medium wells are approximately 50 feet deep. Well development was occurring at the time of the AOC meeting. NVE stated that sampling of the new monitoring wells is scheduled to begin during the week of March 18, 2013. NVE will submit a report with boring logs and field notes to NDEP within 45 days of completing the field activities.

During this field effort, the existing CMW monitoring wells in the vicinity of Pond 4A were redeveloped. Even after redevelopment, water from some of the wells was still silty. Additionally, monitoring wells P-1R, P-9 and IMW-15 are scheduled to be abandoned.

Pond F Solids Removal – NVE reported that Pond F solids removal activities are complete. Approximately 23,000 cubic yards of pond solids above the liner have been removed and disposed in a lined cell of the active permitted landfill located at the site. Soil samples collected beneath the pond liner have similar parameter concentrations as soil samples collected beneath the pond solids at the Former Pond G. A Draft Pond F Solids Removal Completion Report will be submitted to the NDEP during the second quarter of 2013.

Pond 4A/C1/C2 Solids Removal – NVE confirmed that solids removal activities at Ponds 4A, C1 and C2 are planned to begin in 2014. Solids Removal Work Plans will be submitted to NDEP for review during the third quarter of 2013.

Groundwater Monitoring Report (GMR)/Groundwater Sampling Plan – NVE and Stanley Consultants are currently preparing a memo to NDEP that requests reductions in monitoring wells and parameters that are included in the routine groundwater monitoring program. This memo was scheduled to be submitted to NDEP during the first quarter of 2013, but may be submitted during the second quarter. NVE asked to continue semi-annual groundwater monitoring, but only submit one annual report that summarizes the results. NDEP stated that NVE can submit a letter requesting this change. However, NDEP would still like to receive the data on a semi-annual basis and be notified at that time if unusual parameter concentrations or significant changes occur, as opposed to waiting for the annual GMR.

NVE will be requesting proposals this year from contractors for the groundwater sampling and laboratory analysis associated with the semi-annual groundwater monitoring program. The new contracts will start in 2014.

Geologic Data Gaps – NVE and Stanley Consultants stated that they are in the process of identifying and evaluating geologic data gaps and will provide a list to NDEP. NVE will look for opportunities to address geologic data gaps and collect characterization for source areas concurrently. Field work associated with addressing geologic data gaps will not likely occur until 2014.

South Lateral Landfill Expansion – NVE reported that the south lateral landfill expansion is progressing well and liner installation has been completed.

BLM Land Purchase –NVE is currently pursuing the purchase of land in Section 5, east of the Station area, and WMU-7. Due to litigation involving the BLM, the purchase process has been slowed. Currently, the BLM plans to make a presentation to the Moapa Band of Paiutes with NVE representatives present before continuing with the land purchase process. NVE does not have a definitive schedule related to the land purchase.

NVE would like to begin the BLM access process for the area south of Ponds D and E. NVE will prepare a work plan for installing monitoring wells in that area and submit it to NDEP for review. Once NDEP approves the work plan, this information will be provided to BLM to demonstrate the need for access in that area.

Selenium Concentrations in Groundwater – Recent selenium concentrations in several monitoring wells on-site have shown selenium concentrations higher than those that have been historically detected. Stanley Consultants presented a flow chart that documented how the samples were collected, filtered, preserved, and analyzed. NVE/Stanley Consultants reported that a second laboratory had reanalyzed some of these samples and the results were similar to historic concentrations. However, that laboratory used EPA Method 6020 (ICP/MS) as opposed to EPA Method 6010B (ICP). NVE/Stanley Consultants believes that the elevated selenium concentrations detected utilizing the ICP method are potentially due to interference and that ICP/MS may be a more appropriate method of analysis for selenium in the future. NVE will submit a letter requesting NDEP approval of the analysis method change. ARCADIS personnel requested available data and a copy of the aforementioned flow chart for further review.

Community Relations – NDEP stated that their website has been updated to include the 2012 Fact Sheet and revised site figure. Correspondence from 2011 and 2012 has also been posted; however, some of the hyperlinks need to be fixed. NVE/Stanley Consultants will provide electronic copies of 2011 and 2012 NDEP-approved deliverables to NDEP to include on the website.

Next AOC Meeting – The next quarterly AOC meeting was scheduled for June 26, 2013 at the Stanley Consultants office at 5820 S. Eastern Avenue in Las Vegas. This meeting will include a workshop including visualization of the preliminary CSM. NDEP requested CSM information in advance so they can review the materials prior to the meeting.

NDEP Action Items from Quarterly AOC Meeting on March 13, 2013

Priority	Deliverables Already Submitted to NDEP	Submittal Date	Party Responsible	Notes
1	PSAICR	11-16-12	NDEP/ARCADIS	NDEP to provide comments within a few weeks of the 3-13-13 meeting.
2	Background Soil Data Validation Report	7-16-12	NDEP/ARCADIS	
3	3rd Quarter 2012 Meeting Minutes	11-26-12	NDEP/ARCADIS	
4	4th Quarter 2012 Meeting Minutes	12-20-12	NDEP/ARCADIS	

	Future Submittals and Action Items	Estimated Delivery Date		
	Ponds D/G solids removal oversight report	TBD	ARCADIS	Arcadis to document their oversight activities
	Geologic data gaps priorities	1st Quarter 2013	NVE/STANLEY CONSULTANTS	
	Background Report (soil and aquifer testing)	1st Quarter 2013	NVE/STANLEY CONSULTANTS	
	Request to change selenium analysis method/provide information and data regarding ICP vs ICP/MS analysis	2nd Quarter 2013	NVE/STANLEY CONSULTANTS	
	Request to reduce GMR reporting requirements from semi-annual to annual	2nd Quarter 2013	NVE/STANLEY CONSULTANTS	
	Groundwater Monitoring Reduction Memo	2nd Quarter 2013	NVE/STANLEY CONSULTANTS	
	Work Plan with schedule for addressing diesel recovery and treatment system operations	1st Quarter 2013	NVE	
	4th Quarter 2012 Background Groundwater Data Validation Reports	April 2013	NVE/STANLEY CONSULTANTS	
	1st Quarter 2013 semi-annual report with reevaluated contour intervals/more graphs	5-15-13	NVE/STANLEY CONSULTANTS	

	Unit 4 Pond Monitoring Well Installation Report	May 2013	NVE	45 days from completion of field activities
	Pond F Solids Removal Completion Report	2nd Quarter 2013	NVE/STANLEY CONSULTANTS	
	Pond 4A and Ponds C1/C2 Solids Removal Work Plans	3rd Quarter 2013	NVE/STANLEY CONSULTANTS	NVE plans to begin solids removal activities in 2014.
	Provide electronic copies of 2011 and 2012 NDEP-approved deliverables to NDEP to include on the website	2nd Quarter 2013	NVE/STANLEY CONSULTANTS	

NV Energy – Reid Gardner Station
Implementation of Administrative Order on Consent
Quarterly AOC Meeting
March 13, 2013, 9:00 AM
List of Attendees

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